LEAD HAVING VARYING STIFFNESS AND METHOD OF MANUFACTURING THEREOF

IN THE CLAIMS

A set of claims is provided below for the convenience of the Examiner.

1-15. (Canceled)

An apparatus comprising: 16. (Previously Presented)

a lead body extending from a proximal end to a distal end and having an intermediate portion therebetween, the lead body including two or more coradial individually insulated coradial conductors disposed therein, wherein the coradial conductors are wound about a single axis;

the individually insulated coradial conductors including a first conductor and a second conductor, the first conductor comprised of a first material, and the second conductor comprised of a second material, wherein the first material has a different stiffness than the second material; and

an electrode assembly including at least one electrode electrically coupled with at least one of the conductors.

- 17. (Previously Presented) The apparatus as recited in claim 16, wherein at least one coradial conductor traverses from the proximal end to the distal end, and at least one other coradial conductor traverses along only a portion of the lead body.
- The apparatus as recited in claim 17, wherein the at least one other 18. (Previously Presented) coradial conductor electrically and mechanically terminates at the electrode assembly.
- The apparatus as recited in claim 16, wherein one or more coradial 19. (Previously Presented) conductors includes two or more filars.
- 20. (Original) The apparatus as recited in claim 16, wherein the first material and the second material have different electrical properties.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE

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21. (Original) The apparatus as recited in claim 16, wherein the first material comprises MP35N.

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22. (Original) The apparatus as recited in claim 21, wherein the second material comprises

Pt/Ta.

23. (Previously Presented) The apparatus as recited in claim 22, wherein the lead body

includes a first section near the distal end, a third section near the proximal end, and a second

section disposed between the first and the third sections, where the first coradial conductor is

disposed only in the second and third sections.

24. (Previously Presented) The apparatus as recited in claim 16, wherein the individually

insulated coradial conductors further include a third coradial conductor and a fourth coradial

conductor, the first, second, third, and fourth conductors disposed at the proximal end of the lead

body, and the first and second conductors disposed at the distal end of the lead body.

25. (Previously Presented) The apparatus as recited in claim 16, wherein at least one of the

individually insulated coradial conductors is formed of material having heat setting capabilities.

26. (Previously Presented) The apparatus as recited in claim 16, wherein the individually

insulated coradial conductors and the lead body have a two or three dimensional bias.

27. (Withdrawn) An apparatus comprising:

a lead body extending from a proximal end to a distal end and having an intermediate

portion therebetween, the lead body including two or more individually insulated coradial

conductors disposed therein;

the insulated conductors including a first conductor and a second conductor, the first

conductor traversing along less than an entire length of the lead body, the first conductor

extending from the distal end of the lead body to the intermediate portion;

the second conductor traversing from the proximal end to the distal end of the lead body;

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at least the first conductor is comprised of a first material, at least the second conductor is comprised of a second material, the first material having a different stiffness than the second material;

the lead body having four conductors disposed at the proximal end of the lead body, and two conductors disposed at the distal end of the lead body; and

an electrode assembly including at least one electrode electrically coupled with at least one conductor, the first conductor electrically and/or mechanically terminating at the electrode assembly.

A method of varying the stiffness of a coiled conductor assembly, the 28. (Withdrawn) method comprising:

winding a plurality of conductors to form the coiled conductor assembly pulling at least one loop of a first conductor away from the coiled conductor assembly.

- The method as recited in claim 28, further comprising crimping the at least 29. (Withdrawn) one loop.
- The method as recited in claim 29, further comprising electrically 30. (Withdrawn) coupling the first conductor to an electrode.
- The method as recited in claim 30, further comprising electrically 31. (Withdrawn) terminating the first conductor at the electrode.
- The method as recited in claim 28, further comprising spinning a mandrel 32. (Withdrawn) and forming the coiled conductor assembly therein, and pulling the loop includes stopping the mandrel.
- The method as recited in claim 28, further comprising pulling one or more 33. (Withdrawn) second loops of a second conductor.

intermediate portion of the lead.

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- 34. (Withdrawn) The method as recited in claim 28, further comprising pulling one or more second loops of a second conductor having a different material than the first conductor.
- The method as recited in claim 33, wherein pulling one or more second 35. (Withdrawn) loops is performed directly adjacent to the first loop.
- The method as recited in claim 33, further comprising pulling one or more 36. (Withdrawn) third loops of a third conductor.
- The method as recited in claim 36, further comprising pulling one or more 37. (Withdrawn) third loops of a fourth conductor.
- A method of modifying a stiffness of a lead extending from a proximal 38. (Withdrawn) end to a distal end, where the lead includes two or more conductors therein, the method comprising:

forming insulation on the two or more conductors; and winding the two or more conductors and dropping out one or more conductors at an

- The method as recited in claim 38, wherein winding the two or more 39. (Withdrawn) conductors includes winding two or more conductors each having a different material.
- The method as recited in claim 38, further comprising pulling a loop of at 40. (Withdrawn) least one conductor during the winding.
- The method as recited in claim 40, further comprising crimping and 41. (Withdrawn) swaging the loop of conductor.
- The method as recited in claim 41, further comprising electrically 42. (Withdrawn) coupling the conductor with an electrode of the lead.

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43. (Previously Presented) The apparatus as recited in claim 16, wherein the coradial conductors form a single lumen within the lead body.

The apparatus recited in claim 16, wherein the lead body includes a 44. (Previously Presented) first section near the distal end, a third section near the proximal end, and a second section disposed between the first and third sections, where the first conductor is disposed only in the first and third sections.

The apparatus recited in claim 16, wherein the two or more 45. (Previously Presented) coradial conductors are concentric with the lead body.

The apparatus recited in claim 16, wherein the two or more 46. (Previously Presented) coradial conductors lie adjacent to the outer surface of the lead body.